

## **APPENDIX A**

### **COMMENTS AND RESPONSES ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR THE ACCELERATED TANK DEMONSTRATION PROJECT**

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# Oregon

Theodore R. Kulungoski, Governor



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OF ENERGY

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February 14, 2003

Mary Beth Burandt  
Document Manager  
Office of River Protection  
U.S. Department of Energy  
P.O. Box 450, Mail Stop H6-60  
Richland, WA 99352

Subject: Oregon Office of Energy Comments on the Draft Environmental Assessment for the Accelerated Tank Closure Demonstration Project.

Dear Ms Burandt:

Reduction of the risk from the high-level waste tanks at Hanford has long been one of Oregon's top Hanford priorities. The highly radioactive, toxic mixed wastes of these tanks represent both a short term and a long term serious threat to the health of the Columbia River and therefore also to the health of Oregon and Oregonians. One of the important steps in reducing the long-term risks to Oregon of these wastes is a technically sound, environmentally protective and legally compliant closure of the tanks. Therefore, we are vitally interested in this aspect of Hanford cleanup.

We have reviewed the draft environmental assessment for the accelerated tank closure demonstration project and have concluded that this document is inadequate to make a determination of no significant impact. Our reasons for this determination follow:

1. The Council on Environmental Quality requires that in determining whether or not a proposed action has a significant impact, the degree to which the proposed action may establish a precedent for future actions with significant effects should be considered. [CEQ 1508.27(b)(6)] Since this project's purpose is to establish precedents for future tank closures, which will have very significant impacts, a detailed consideration of this question must be included in this environmental assessment.
2. A potential source of significant environmental impact is the material that will be used to stabilize the residual waste in tank C-106. The environmental assessment asserts "The volume of initial fill material in C-106 that would be retrieved is not substantial in comparison to the volume of waste to be retrieved from all tanks." This single comment does not contain enough detail to support the contention of no significant impact from this material. A more detailed discussion of this possibility needs to be included in this document. For example, what materials are being considered as fill materials? What is the

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ease of retrieval of these materials if future retrieval is necessary? What will be the disposition of these materials if retrieval is necessary; are they high-level waste?

Should you have any questions, please contact Mr. Douglas Huston of my staff at (503)378-4456.

Sincerely,

Handwritten signature of D.S. Huston in cursive script, followed by the word "for:".

Ken Niles/ Administrator  
Nuclear Safety Division

Cc: Shelley Cimon, Oregon Hanford Waste Board Chair  
Armand Minthorne, Confederated Tribes of the Umatilla Indian Reservation  
Russell Jim, Yakama Nation  
Pat Sobotta, Nez Perce Tribe  
Michael Wilson, Washington Department Of Ecology  
Nicholas Ceto, Environmental Protection Agency  
Todd Martin, Hanford Advisory Board Chair



03-TPD-063

Department of Energy  
Richland Operations office  
P. O. Box 550  
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**JUN 24 2003**

Ken Niles, Administrator  
Nuclear Safety Division  
State of Oregon  
Oregon Office of Energy  
625 Marion St. NE Suite 1  
Salem, OR 97301-3742

RESPONSE TO COMMENTS ON ENVIRONMENTAL ASSESSMENT DOE/EA-  
1462 FOR THE ACCELERATED TANK CLOSURE DEMONSTRATION PROJECT

Dear Mr. Niles:

The U.S. Department of Energy (DOE), Office of River Protection (ORP) acknowledges receipt of the comments provided by the State of Oregon, Office of Energy (OOE) on the Draft Environmental Assessment (EA) for the Accelerated Tank Closure Demonstration (ATCD) Project. ORP believes the conduct of this project will enhance our knowledge of the activities involved in the closure of single-shell tanks at the Hanford Site. The ATCD Project will contribute to the DOE commitment to protect public health and the environment.

The OOE has provided several comments on the Draft EA for the ATCD Project. These comments, with the DOE responses, are enclosed. As appropriate, DOE has noted where changes have been made in the Final EA as part of our response.

DOE appreciates your interest in this project. If you have additional questions concerning the proposed action, please contact Mr. Robert Lober at 509-373-7949. Questions on the NEPA process can be directed to me at 509-376-6667.

Sincerely,

A handwritten signature in dark ink, appearing to read "Paul F. X. Dunigan, Jr.".

Paul F. X. Dunigan, Jr.  
NEPA Compliance Officer

TPD:RWL

Attachment

cc: Administrative Record

**Department of Energy Response to State of Oregon, Oregon Office of Energy Comments on the ATCD Project Draft EA (DOE/EA-1462)**

The following is a listing of the specific comments made by the State of Oregon, Oregon Office of Energy and the DOE response to these comments. As appropriate, the comment responses indicate where changes in the final environmental assessment have been made.

**Comment 1:**

Since this project's purpose is to establish precedent for future tank closures, which will have very significant impacts, a detailed consideration of this question must be included in the environmental assessment.

**Response:**

The primary purposes of this project are:

- Field deployment of grout production and placement equipment.
- Placement and distribution of grout in tank.
- Physical response of tank residual to grout during placement.
- Worker/airborne exposure measurements/mitigation.
- Collect information on project costs and efficiencies

The Council on Environmental Quality (CEQ) and the DOE National Environmental Policy Act (NEPA) implementing orders and guidance are very specific that demonstration projects do not reach a level of investment or commitment that would likely determine subsequent development or restrict later actions. The purpose of this demonstration project is to obtain information and experience to better understand closure actions, not to establish precedent for future tank closures. The decision on future tank closures will not be made until after the Tank Closure EIS has been completed at which time DOE will issue a Record of Decision (ROD) that will identify how future tank closures will be accomplished. Furthermore, until the analysis of the Tank Closure EIS is completed, DOE cannot determine whether the impacts of final tank closure are or are not significant.

This demonstration project will not determine subsequent development or restrict later actions concerning the closure of C-106. Following retrieval, DOE and the Tri-Party Agreement (TPA) regulators will review the success of the retrieval efforts. If it is determined that sufficient waste has been removed from the tank, then DOE would proceed with the placement of the Phase I engineered fill portion of the demonstration. If it is determined that sufficient waste has not been removed to proceed with the demonstration, then DOE would not place any fill material in the tank and would suspend component closure activities for C-106 pending the completion of the Tank Closure EIS and issuance of the ROD.

The Tank Closure EIS is evaluating alternatives for closure of Waste Management Areas (WMAs) and the entire single shelled tank (SST) system. These alternatives include landfill closure, modified clean closure and clean closure. The Accelerated Tank Closure Demonstration

(ATCD) Project does not foreclose implementation of any of these alternatives. This demonstration preserves all future options for final closure of C-106 while obtaining important information and protecting human health and the environment. The impacts of implementing a final closure action will be considered in the Tank Closure EIS. If removal of tanks under the clean closure option were selected then the volume of fill material in C-106 would be excavated along with the tank and surrounding soil. The impacts of implementation of this closure action are more appropriately addressed in the Tank Closure EIS since there are no final closure decisions being made as part of this demonstration project.

Comment 2:

The environmental assessment asserts, “The volume of initial fill material in C-106 that would be retrieved is not substantial in comparison to the volume of waste to be retrieved from all tanks.” This single statement does not contain enough detail to support the contention of no significant impacts from this material. A more detailed discussion of this possibility needs to be included in this document.

Response:

The ATCD Project contemplates the retrieval of tank waste up to the retrieval goal of the Tri-Party Agreement (HFFACO). Even if retrieval exceeds the HFFACO goal, there are still benefits to be gained by placement of grout in C-106. This comment has been edited from the environmental assessment because retrievable grout is no longer part of the demonstration project. The ATCD Project will demonstrate field deployment of a Phase I grout formulation fill material for subsequent tank closures. Between 160 and 500 cubic yards of grout may be placed in C-106. The total volume of C-106 is approximately 4,000 cubic yards. The amount of grout to be placed in this one tank is not a substantial amount of material.

Comment 3:

For example, what materials are being considered as fill materials?

Response:

Specially formulated grout is going to be used in the Phase I fill. It is possible that a granular absorbent could be used to stabilize any free residual liquid as part of a top dressing. The Savannah River Technology Center (SRTC) is preparing the technical specifications for the tank fill formulations and placement that will be incorporated into a vendor specification. The SRTC development program will recommend a grout formula based on variables such as compressive strength, flow, gel time, set time, bleed water, air content, hydraulic conductivity, porosity and the applicability of incorporating sequestering agents.

Comment 4:

What is the ease of retrieval of these materials if future retrieval is necessary?

Response:

The ATCD Project is no longer considering the placement of a retrievable material. The Phase I grout placed during the ATCD Project would be retrieved if DOE determines in the Tank Closure EIS that tank C-106 is to be removed. The removal of an underground tank the size of C-106 that has stored radioactive waste would be difficult. The removal of tank C-106 would

not be made more difficult with the Phase I grout in place. Benefits to placement of the Phase I grout in C-106 are that it would provide protection during tank removal by shielding workers from the residual waste in the tank. The removal of C-106 with the grout in place would not require any new technology beyond that used for tank removal only.

This demonstration project does not determine subsequent development or restrict later actions concerning the final closure of C-106. If the Tank Closure EIS selects landfill closure, this demonstration is consistent with implementation of that alternative. If the Tank Closure EIS selects clean closure, the volume of grout in the tank does not make removal of the entire tank impractical or impossible. Therefore, this demonstration preserves future options for final closure of C-106. This demonstration constitutes a component closure action to test Phase I of a landfill closure, but would not proceed to Phases II and III until after the Tank Closure ROD is issued.

Comment 5:

What will be the disposition of these materials if retrieval is necessary? Are they high-level waste?

Response:

If tank removal were selected for final closure in the Tank Closure EIS, then all material would be classified and disposed of in compliance with DOE Orders.





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

1415 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

February 20, 2003

Mr. Paul F.X. Dunigan, Jr.  
United State Department of Energy  
Office of River Protection  
P.O. Box 450  
Richland, Washington 99352

Dear Mr. Dunigan:

Re: Washington State Department of Ecology Nuclear Waste Programs' Comments on Draft  
Environmental Assessment for the Accelerated Tank Closure Demonstration Project, 200-  
East Area, Hanford Site, Richland, Washington (DOE/EA-1462)

We appreciate the opportunity to review the *Draft Environmental Assessment (EA) for the Accelerated Tank Closure Demonstration Project (ATCD)*. We have several serious concerns with the scope of the project as planned; however, we could not evaluate the environmental impacts of the project from the information provided in the draft ATCD EA. Until that information is available, we cannot support the addition of stabilizing materials, the alteration of access to Tank 241-C-106, or the disturbance of Borrow Pit 30 to provide fill.

Ecology wishes to provide the following specific comments on the draft EA:

**Tank Fill**

1. The draft EA as written does not satisfy the requirements of Title 40 *Protection of the Environment*, Section 1508.9 Environmental Assessment, item (3)(b) to provide a brief discussion of the environmental impacts of the proposed action and alternatives. Of particular concern to Ecology is the lack of substantive technical information about the environmental impacts of adding tank fill material in either loose granular or low-strength cementitious form to residual waste left after retrieval. The draft ATCD EA states that tank fill alternatives were evaluated in the *Tank Alternative Closure Demonstration Project Alternative Generation and Analysis*; however, no evaluation of any significant environmental impacts of the addition of the fill material is included in the draft ATCD Project EA.

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**DOE-RL/RLCC**

Mr. Paul F.X. Dunigan, Jr.  
February 20, 2003

2. Ecology cannot support the contention made in the draft EA that retrieval of the fill material will not have significant environmental consequences because the physical form of the residual waste may be altered. The residual liquid waste may be absorbed into the cementitious mixture, which will in turn create a new added waste volume in the tank. Ecology does not understand what environmental benefits will result from the creation of an additional waste volume. From the United States Department of Energy's (USDOE) description in the draft ATCD EA, the waste in its present form can be removed. From the description in the draft ACTD EA, it appears that the environmental impact will not be beneficial.
3. Creation of a new waste volume does not support the policy of the State of Washington Legislature "to encourage reduction in the use of hazardous substances and reduction in the generation of hazardous waste whenever economically and technically practicable" (see Revised Code of Washington 70.95C.010). Ecology does not support any action which is not consistent with that policy.
4. From the draft ATCD EA, Ecology cannot determine if any significant environmental impacts will result from the addition of sequestering agents to the fill material. The sequestering agents are said to reduce solubility and/or mobility of key contaminants. No information is provided about the chemical reactions of the sequestering agents with the waste residuals. Ecology cannot determine if any significant environmental impacts will result through addition of those agents.
5. No information was provided to document the compatibility of the proposed fill with future final tank fill material, including engineering load/compaction requirements to prevent future tank void space subsidence. Ecology could not evaluate impacts of using the proposed fill on future fill efforts.
6. Also missing from the draft ATCD EA is an analysis of other reasonable alternatives, including not filling the tank following retrieval. By design, successful retrieval of C-106 should remove most of the mobile contaminants and tank waste, making addition of waste stabilizing agents of no environmental benefit. If the retrieval is not successful (i.e., it does not meet Hanford Federal Facility Agreement and Consent Order Milestone M-45 requirements), further retrieval will likely be required.
7. Section 1.0 PURPOSE AND NEED FOR AGENCY ACTION states that the draft ATCD EA is to provide information and analysis of the ATCD activities and the potential environmental effects of the actions. Lacking a discussion of all alternatives to residual waste stabilization, the draft ATCD EA cannot be said to have met the purpose intended.

#### Biological Review

8. Ecology views with concern the intent of the ORP to use Pit 30 as the source of granular flow material. An earlier Environmental Assessment on borrow pits (DOE/EA-1403) noted that Piper's Daisy (*Erigeron piperianus*) had been found in some areas of the pit in the past. The draft ATCD EA does not mention that species, which is considered a sensitive species. It is not mentioned in the SEPA Checklist that accompanied the *Single-Shell Tank System Closure Plan*. Ecology does not regard the evaluation of potential impacts complete because the reviews are limited only to the area of the 241-C Tank Farm, but the proposed action will also affect Pit 30.

Mr. Paul F.X. Dunigan, Jr.  
February 20, 2003

9. Ecology does not consider Section 4.5.1 Threatened and Endangered Species to be complete because it limits the discussion of species to the 241-C Tank Farm and adjacent staging area. Use of Pit 30 expands the evaluation of biological resources; therefore, a summary of the impacts of use of Pit 30 should be included.

#### **Closure Demonstration Work Scope**

10. The draft ATCD EA describes tank isolation processes that will prevent inadvertent waste transfers and water intrusions. This practice appears to offer the least harm to the environment during the time when 241-C-106 awaits closure; therefore, Ecology would like a description of the incremental environmental benefit that will result from the addition of materials to the tank.
11. Section 2.3 of the draft ATCD EA suggests that new or modified penetrations in the top of the tank may be required. None of the potential impacts to the environment that could result from excavation of the area on top of the tank and opening new penetrations in the tank is included. Ecology cannot determine the risk to the environment that could result from those activities (e.g., releases to the air from excavation, alteration of the air flow through the tank that could dislodge contaminants and spread waste, degradation in the structural integrity of the tank) that might result from such preparation.
12. Section 2.5 states that tank fill operations and documentation and assessment of residual waste volume will be conducted using video cameras. Ecology expects sampling of residual waste to be conducted, with video cameras used for verification.
13. Section 2.9 states that isolation measures will be maintained in place until tank closure. Ecology cannot determine what measures will be taken to prevent intrusion after tank closure or during the closure process. Environmental impacts of removing isolation measures or not performing isolation should be addressed.

#### **Groundwater**

14. Ecology is concerned because the draft ATCD EA Section 4.3 describes plumes of contaminants in groundwater and then explains that the contaminants are varying concentrations in the unsaturated area (i.e., the vadose zone above the groundwater). The listed contaminants are present in the vadose zone; however, they have not been detected in groundwater under the entire 200 Area. Section 4.3 should be corrected.
15. Section 4.3 mentions technetium-99 concentrations that exceed the drinking water standard are present in groundwater concentrations below the 241-C Tank Farm. Due to the absence of information about the impacts in the draft ATCD EA, Ecology cannot tell what increased risk to the groundwater will result from the ATCD.

#### **References**

16. The draft ATCD EA referenced two documents that were said to have evaluated tank fill alternatives (DOE-12194 *Tank Alternative Closure Demonstration Project Alternative Generation and Analysis* and RPP-11085 *Approach for the Accelerated Tank Closure Demonstration Project*). These documents were not provided with the draft ATCD EA to Ecology and the information in them was not included in the draft ATCD EA. The pertinent information in the two documents should be summarized in the draft ATCD EA.

Mr. Paul F.X. Dunigan, Jr.  
February 20, 2003

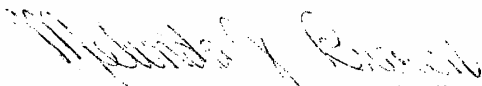
**Impact on Cleanup Resources**

17. The proposed action imposes an unnecessary adverse impact on Hanford cleanup resources because it requires a tank entry be made in addition to entries required for retrieval and final tank fill. Furthermore, if the fill action were reversed, more cleanup resources would be spent for that tank entry and related fill retrieval. Ecology is concerned that the scope and schedule of other Hanford projects will be adversely affected by these actions. Evaluation of the impacts to other Hanford cleanup efforts and the resulting impact(s) to the environment is missing from the draft ATCD EA.

Ecology has found the information presented in the ACTD EA to be incomplete; therefore, we could not complete a thorough review. We request that the USDOE consider these comments before proceeding in its determination of the environmental impact of the project.

If there are any questions or concerns on these comments, please feel free to contact me at (509) 736-3027.

Sincerely yours,



Melinda J. Brown, State Environmental Policy Act Coordinator  
Nuclear Waste Program

MB:jc

cc: Nick Ceto, USEPA  
Bob Lober, ORP  
Andy Stevens, ORP  
Jim Rasmussen, ORP  
R. Ovink, H9-01  
Todd Martin, HAB  
Stuart Harris, CTUIR  
Russell Jim, YIN  
Rick Sobotta, NPT  
Ken Niles, OOE  
Environmental Portal  
Administrative Record: Accelerated Tank Closure

Mr. Paul F.X. Dunigan, Jr.  
February 20, 2003

bcc: Brenda Becker-Khaleel, Ecology  
Joe Caggiano, Ecology  
Laura Cusack, Ecology  
Damon Delistraty, Ecology  
Suzanne Dahl, Ecology  
Jane Hedges, Ecology  
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NWP Reader File  
NWP Central File: Accelerated Tank Closure



03-TPD-062

Department of Energy  
Richland Operations office  
P. O. Box 550  
Richland, Washington 99352  
**JUN 24 2003**

Melinda Brown  
State Environmental Policy Act Coordinator  
Nuclear Waste Program  
State of Washington, Department of Ecology  
1315 W. 4<sup>th</sup> Avenue  
Kennewick, Washington 99336-6018

RESPONSE TO COMMENTS ON ENVIRONMENTAL ASSESSMENT DOE/EA-1462 FOR THE ACCELERATED TANK CLOSURE DEMONSTRATION PROJECT

Dear Ms. Brown:

The U.S. Department of Energy (DOE), Office of River Protection (ORP) acknowledges receipt of the comments provided by the State of Washington, Department of Ecology (Ecology) on the Draft Environmental Assessment (EA) for the Accelerated Tank Closure Demonstration (ATCD) Project. ORP believes the conduct of this project will enhance our knowledge of the activities involved in the closure of single-shell tanks at the Hanford Site. The ATCD Project will contribute to the DOE commitment to protect public health and the environment.

Ecology has provided several comments on the Draft EA for the ATCD Project. These comments, with the DOE responses, are enclosed. As appropriate, DOE has noted where changes have been made in the Final EA as part of our response.

DOE appreciates your interest in this project. If you have any questions concerning the proposed action, please contact Mr. Robert Lober, Tank Farms Programs and Projects Division, (509) 373-7949. Questions on the NEPA process can be directed to me, (509)-376-6667.

Sincerely,

  
Paul F. X. Dunigan, Jr.  
NEPA Compliance Officer

TPD:RWL

Attachment

cc: Administrative Record

**State of Washington Department of Ecology Comments and Department of Energy  
Response on the ATCD Project Draft EA DOE/EA-1462**

The following is a listing of the comments made by the State of Washington, Department of Ecology and the DOE response to these comments. As appropriate, the comment responses indicate where changes in the final environmental assessment have been made.

**Comment 1:**

The draft EA does not satisfy the requirements of Title 40 Protection of the Environment, Section 1508.9 Environmental Assessment, item (3)(b) to provide a brief discussion of the environmental impacts of the proposed action and alternatives. Of particular concern to Ecology is a lack of substantive technical information about the environmental impacts of adding tank fill material in either loose granular or low strength cementation form to residual waste left after retrieval.

**Response:**

DOE does believe that the EA satisfies 40 CFR 1508.9 requirements for an Environmental Assessment. The environmental assessment does present alternatives (Section 3.0) and an appropriate level of discussion (Sections 2.0, 4.0, and 5.0) so that decision makers would be able to understand the impacts of the demonstration project.

The demonstration project will provide information on the technical and regulatory aspects of tank closure procedures and activities. The demonstration will be conducted in the tank farm and inside the tank environment. There is no other setting in which this kind of data can be collected. The potential impacts associated with removing the tank and the grout inside the tank are minor compared to the value of the information that will be obtained from the demonstration.

**Comment 2**

Ecology cannot support the contention made in the draft EA that retrieval of the fill material will not have significant environmental consequences because the physical form of the residual waste may be altered. The residual liquid waste may be absorbed into the cementitious mixture, which will in turn create a new added waste volume in the tank. Ecology does not understand what environmental benefits will result from the creation of an additional waste volume. From the USDOE description in the draft ACTD EA the waste in its present form can be removed. From the description in the draft ACTD EA, it appears that the environmental impact will not be beneficial.

**Response:**

The ATCD Project contemplates the retrieval of tank waste up to the volumetric goal of the Tri-Party Agreement (HFFACO). Following retrieval, DOE and the Tri-Party regulators will review the success of the retrieval efforts. If it is determined that sufficient waste has been removed from the tank, then DOE would proceed with the placement of the Phase I engineered fill portion of the demonstration. If it is determined that sufficient waste has not been removed to proceed with the demonstration, then DOE would not place any fill material in the tank and would suspend component closure activities for C-106 pending the completion of the Tank Closure EIS.

The text of the EA has been edited because retrievable grout is no longer part of the demonstration project. The ATCD Project will demonstrate field deployment of a high compression strength Phase I grout fill material. Between 160 and 500 cubic yards of grout may be placed in C-106. The total volume of C-106 is approximately 4,000 cubic yards. The amount of grout to be placed in this one tank is not a substantial amount of material and will not preclude the implementation of any of the tank closure alternatives under consideration in the Tank Closure EIS.

Comment 3:

Creation of a new waste volume does not support the policy of the State of Washington Legislature “to encourage reduction in the use of hazardous substance and reduction in the generation of hazardous waste whenever economically and technically practicable” Ecology does not support any action which is not consistent with this policy.

Response:

DOE believes that the ATCD Project is consistent with this policy.

Comment 4:

From the draft ATCD, Ecology cannot determine if any significant environmental impacts will result from the addition of sequestering agents to the fill material. The sequestering agents are said to reduce solubility and/or mobility of key contaminants.

Response:

The ATCD Project will collect information on 1) the technical and regulatory aspects of tank retrieval and closure activities, 2) the physical response and behavior of a Phase I grout fill in an actual tank, 3) field deployment of grout placement equipment and 4) the conduct of component closure activities of C-106. This demonstration may include the deployment of grout with sequestering agents. This would allow field-testing of this mixture to determine its compatibility with potential future grouting campaigns. Sequestering additives are being evaluated by the Savannah River Technology Center and tested in the laboratory environment to establish their usefulness and compatibility with C-106 conditions. Non-useful or incompatible sequestering agents would not be used in the ATCD Project.

Comment 5:

No information was provided to document the compatibility of the proposed fill with future final tank fill material, including engineering load/compaction requirements to prevent future tank void space subsidence. Ecology could not evaluate impacts of using the proposed fill on future fill efforts.

Response:

The fill will be a grout that is designed to be free flowing with adequate compressive strength to support future fill material loading. Section 2.5 of the EA has been modified and provides additional information on grout specifications.



Comment 6:

Also missing from the draft ATCD EA is an analysis of other reasonable alternatives including not filling the tank following retrieval. By design, successful retrieval of C-106 should remove most of the mobile contaminants and tank waste, making addition of waste stabilizing agents of no environmental benefit. If the retrieval is not successful (i.e., it does not meet Hanford Federal Facility Agreement and Consent Order Milestone M-45 requirements), further retrieval will likely be required.

Response:

The alternative of not filling the tank is addressed in the no action alternative (Section 3.1). Under the no action alternative there would be no ATCD Project.

Comment 7:

Section 1.0 PURPOSE AND NEED FOR AGENCY ACTION states that the draft ATCD EA is to provide information and analysis of the ATCD activities and the potential environmental effects of the actions. Lacking a discussion of all alternatives to residual waste stabilization, the draft ATCD EA cannot be said to have met the purpose intended.

Response:

The purpose and need statement (Section 1.0) for the ATCD Project has been modified. The purpose and need for conducting the ATCD Project is to collect information concerning the use of particular technologies that may be used in future tank closure actions.

Comment 8:

Ecology views with concern the intent of the ORP to use Pit 30 as the source of granular flow material. An earlier Environmental Assessment on borrow pits (DOE/EA-1403) noted that Piper's Daisy (*Erigeron piperlanus*) had been found in some areas of the pit in the past. The draft ATCD EA does not mention that species, which is considered a sensitive species. It is not mentioned in the SEPA checklist that accompanied the *Single-Shell Tank System Closure Plan*. Ecology does not regard the evaluation of potential impacts complete because the reviews are limited only to the area of the 241-C Tank Farm, but the proposed action will also affect Pit 30.

Response:

Grout used for this demonstration would be commercially produced offsite and trucked to the C tank farm. The ATCD Project would not utilize any Hanford Site borrow materials.

Comment 9

Ecology does not consider Section 4.5.1 Threatened and Endangered Species to be complete because it limits the discussion of species to the 241-C Tank Farm and adjacent staging area. Use of Pit 30 expands the evaluation of biological resources; therefore, a summary of the impacts of use of Pit 30 should be included.

Response:

The use of borrow material from Hanford Site borrow areas is no longer in the scope of the ATCD Project.

## Comment 10

The draft ATCD EA describes tank isolation processes that will prevent inadvertent waste transfers and water intrusions. This practice appears to offer the least harm to the environment during the time when 241-C-106 awaits closure; therefore, Ecology would like a description of the incremental environmental benefit that will result from the addition of materials to the tank.

## Response:

Section 1.3 of the EA has been modified to identify the benefits of this demonstration project.

## Comment 11:

Section 2.3 of the draft ATCD EA suggests that new or modified penetrations in the top of the tank may be required. None of the potential impacts to the environment that could result from excavation of the area on top of the tank and opening new penetrations in the tank is included. Ecology cannot determine the risk to the environment that could result from those activities (e.g., releases to the air from excavation, alteration of the air flow through the tank that could dislodge contaminants and spread waste, degradation in the structural integrity of the tank) that might result from such preparation.

## Response:

There will not be any new or modified penetration into C-106. This project would be accomplished using existing risers. Section 2.3 has been modified to remove the discussion of new or modified penetrations into the tank.

## Comment 12:

Section 2.5 states that tank fill operations and documentation and assessment of residual waste volume will be conducted using video cameras. Ecology expects sampling of residual waste to be conducted, with video cameras used for verification.

## Response:

Waste sampling will occur following retrieval activities, prior to grout placement.

## Comment 13:

Section 2.9 states that isolation measures will be maintained in place until tank closure. Ecology cannot determine what measures will be taken to prevent intrusion after tank closure or during the closure process. Environmental impacts of removing isolation measures or not performing isolation should be addressed.

## Response:

Additional text has been added to EA Section 2.9 to clarify post closure activities following the ATCD Project. The C tank farm is maintained in isolation following established security procedures. These procedures will remain in-place during and following the demonstration project. Isolation and security measures following final closure of the C tank farm will be established based upon the final closure method to be defined in the Tank Closure ROD and the DOE Long-term Stewardship Program.

Comment 14:

Ecology is concerned because the draft ATCD EA Section 4.3 describes plumes of contaminants in groundwater and then explains that the contaminants are varying concentrations in the unsaturated area (i.e., the vadose zone above the groundwater). The listed contaminants are present in the vadose zone; however, they have not been detected in groundwater under the entire 200 Area. Section 4.3 should be corrected.

Response:

Section 4.3 has been revised to address this comment.

Comment 15:

Section 4.3 mentions technetium-99 concentrations that exceed the drinking water standard are present in groundwater concentrations below the 241-C Tank Farm. Due to the absence of information about the impacts in the draft ATCD EA, Ecology cannot tell what increased risk to the groundwater will result from the ATCD.

Response:

The ATCD Project would not be expected to affect the vadose zone or the groundwater contaminant levels in a negative manner. The planned retrieval action would utilize lower liquid volumes, have less hydraulic pressure, and the sluicing liquid would spend less time in the tank than under typical sluicing operations. Following Phase I grout placement, the residuals in the tank would be more isolated and immobilized than they are now. DOE has modified the discussions in Section 4.3 and Section 5.3 to present this information.

Comment 16:

The draft ATCD EA referenced two documents that were said to have evaluated tank fill alternatives (DOE 12194 *Tank Alternative Closure Demonstration Project Alternative Generation and Analysis* and RPP-11085 *Approach for the Accelerated Tank Closure Demonstration Project*). These documents were not provided with the draft ATCD EA to Ecology and the information in them was not included in the draft ATCD EA. The pertinent information in the two documents should be summarized in the draft ATCD EA.

Response:

The executive summary of RPP 12194 has been added as EA Appendix C.

Comment 17:

The proposed action imposes an unnecessary adverse impact on Hanford cleanup resources because it requires a tank entry be made in addition to entries required for retrieval and final tank fill. Furthermore, if the fill action were reversed, more cleanup resources would be spent for that tank entry and related fill retrieval. Ecology is concerned that the scope and schedule of other Hanford projects will be adversely affected by these actions. Evaluation of the impacts of other Hanford cleanup efforts and the resulting impact(s) to the environment is missing from the draft ATCD EA.

Response:

The scope of the ATCD Project has been modified and retrievable grout is no longer going to be placed in the tank. Entries for the ATCD would be limited to final waste retrieval and grout placement. Entries for removing the grout are not an option under the revised project but would be an action for consideration in the Tank Closure EIS.

DOE believes the information obtained from this demonstration justifies the potential costs noted. This demonstration is expected to be consistent with the final closure decision reached in the Tank Closure EIS. It is not expected that the ATCD Project will influence other project schedules.

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State of Washington  
**DEPARTMENT OF FISH AND WILDLIFE**

Mailing Address: 600 Capitol Way N, Olympia, WA 98501-1091 • (360) 902-2200; TDD (360) 902-2207  
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

February 13, 2003

Mr. Paul F.X. Dunigan, Jr.  
NEPA Compliance Officer  
U.S. Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, WA 99352

Dear Mr. Dunigan:

RE: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR THE ACCELERATED TANK  
CLOSURE DEMONSTRATION PROJECT (DOE/EA-1462)

The Washington Department of Fish and Wildlife (WDFW) has completed review of the EA for the Accelerated Tank Closure Demonstration Project (ATCD). The mandate of WDFW is to preserve, protect, perpetuate, and manage the wildlife and food fish, game fish, and shellfish in the state waters and offshore waters. Wildlife, fish, and shellfish are the property of the state (RCW 77.04.012).

The EA indicates approximately 126 m<sup>3</sup> (165 yd<sup>3</sup>) of fill materials being considered for use in the ATCD project, and it further describes the use of an existing borrow site, Site 30, but it does not indicate how much fill from this borrow site will be needed, and how it will be expanded. The EA also discusses the possibility of an alternative borrow site being used, but it does not indicate the location. The Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement (CLUP), for Pit 30, indicates, *"Expansion of the existing pit would be necessary to provide sufficient quantities of this material. Full use of the site would eradicate approximately 138 acres of shrub steppe habitat. Cultural resource and sensitive species surveys have not been conducted for Pit 30 and would be required prior to excavation. Completion of these surveys and consultation with the State of Washington and the USFWS would be required prior to initiating activity"*. Biological surveys should be completed during the spring, when species most likely impacted by the project would be encountered, at all sites impacted by the ATCD project including any borrow sites. Rare plants surveys should also be included, considering the fact that Table 4-1 includes 6 species of rare plants The Nature Conservancy discovered on Central Hanford (Columbia milkvetch, dwarf evening primrose, Hoover's desert parsley, loeflingia, persistent sepal yellowcrest, Umtanum desert buckwheat).

WDFW recommends compensatory mitigation (ratio of 3:1) for shrub steppe habitat that may be impacted by this project, including the use of borrow sites. The goal of our mitigation policy is to

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Mr. Paul F.X. Dunigan, Jr.

February 13, 2003

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maintain the functions and values of fish and wildlife habitat, and we strive to protect the productive capacity and opportunities reasonably expected of a site in the future. In the long-term WDFW shall seek a net gain in productive capacity of habitat through restoration, creation and enhancement.

The Federal or Washington State Listed Threatened, Endangered, and candidate species occurring on the Hanford site (Table 4-1) excluded several species. This table should also include the following:

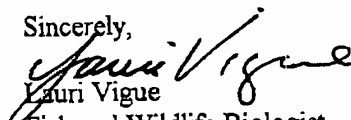
- Loggerhead shrike (SC/FSC)
- Washington Ground Squirrel (SC/FC)
- Burrowing Owl (SC/FSC)
- Pygmy Rabbit (SE/FE)
- Northern Goshawk (SC/FSC)
- Common Loon (SS)
- Sagebrush Lizard (FSC)
- Olive-sided Flycatcher (FSC)
- Willow Flycatcher (FSC)
- Bull Trout (SC/FT)
- Lewis Woodpecker (SC)
- Vaux's Swift (SC)

Also, steelhead are incorrectly listed in Table 4-1, they are protected under the mid Columbia River ESU, not upper Columbia ESU.

As indicated above, WDFW's main concern with this EA is the insufficient amount of information documented to adequately determine the impact to the environment from this proposed project. This EA excluded maps that describe the impact site; maps and illustrations of the proposed project site including the aerial photo (2000) referenced on page 11, would have been helpful to include in the appendix.

WDFW appreciates the opportunity to comment on this EA. I may be reached at (360) 902-2425 if you have questions.

Sincerely,

  
Lauri Vigue  
Fish and Wildlife Biologist

Cc: Ted Clausing, WDFW  
Melinda Brown, WDOE  
Larry Goldstein, WDOE



03-TPD-061

Department of Energy  
Richland Operations office  
P. O. Box 550  
Richland, Washington 99352

JUN 25 2003

Lauri Vigue  
Fish and Wildlife Biologist  
State of Washington, Department of Fish and Wildlife  
600 Capitol Way N. Olympia WA 98501-1091

RESPONSE TO COMMENTS ON ENVIRONMENTAL ASSESSMENT DOE/EA-1462 FOR THE ACCELERATED TANK CLOSURE DEMONSTRATION PROJECT

Dear Ms. Vigue:

The U.S. Department of Energy (DOE), Office of River Protection (ORP) acknowledges receipt of the comments provided by the State of Washington, Department of Fish and Wildlife (WDFW) on the Draft Environmental Assessment (EA) for the Accelerated Tank Closure Demonstration (ATCD) Project. ORP believes the conduct of this project will enhance our knowledge of the activities involved in the closure of single-shell tanks at the Hanford Site. The ATCD Project will contribute to the DOE commitment to protect public health and the environment.

The WDFW has provided several comments on the Draft EA for the ATCD Project. These comments, with the DOE responses, are enclosed. As appropriate, DOE has noted where changes have been made in the Final EA as part of our response.

DOE appreciates your interest in this project. If you have additional questions concerning the proposed action, please contact Mr. Robert Lober, Tank Farms Programs and Projects Division, (509) 373-7949. Questions on the NEPA process can be directed to me, (509) 376-6667.

Sincerely,

Paul F. X. Dunigan, Jr.  
NEPA Compliance Officer

TPD:RWL

Attachment

cc: Administrative Record

**Department of Energy Response to Comments provided by the State of Washington,  
Department of Fish and Wildlife on The ATCD Project Environmental Assessment Draft  
EA DOE/EA-1462**

The following is a listing of the specific comments made by the State of Washington, Department of Fish and Wildlife and the DOE response to these comments. As appropriate, the comment responses indicate where changes in the final environmental assessment have been made.

**Comment 1:**

The EA indicates approximately 126 m<sup>3</sup> (165 yds<sup>3</sup>) of fill materials being considered for use in the ATCD Project and it further describes the use of an existing borrow site, Site 30, but it does not indicate how much fill from this borrow site will be needed, and how it will be expanded. The EA also discusses the possibility of an alternative borrow site being used but it does not indicate the location. The Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement (CLUP), for Pit 30 indicates, "Expansion of the existing pit would be necessary to provide sufficient quantities of this material. Full use of the site would eradicate approximately 138 acres of shrub steppe habitat. Cultural resources and sensitive species surveys have not been conducted for Pit 30 and would be required prior to excavation. Completion of these surveys and consultation with the State of Washington and the USFWS would be required prior to initiating activity". Biological surveys should be completed during the spring, when species most likely impacted by the project would be encountered, at all sites impacted by the ATCD Project including any borrow sites. Rare plants surveys should also be included, considering the fact that Table 4-1 includes 6 species of rare plant The Nature Conservancy discovered on Central Hanford (Columbia milkvetch, dwarf evening primrose, Hoover's desert parsley, loeflingia, persistent sepal yellowcrest, Umtanum desert buckwheat).

**Response:**

The use of borrow material from Pit 30 or any other Hanford Site borrow areas is no longer in the scope of the ATCD Project.

**Comment 2:**

WDFW recommends compensatory mitigation (ratio of 3:1) for shrub steppe habitat that may be impacted by this project, including the use of borrow sites.

**Response:**

The ATCD Project would not result in any shrub steppe habitat disturbance. Therefore, there is no basis for compensatory mitigation of this habitat. Section 2.0 of the EA has been revised to clarify the proposed actions.

**Comment 3:**

The Federal or Washington State Listed Threatened, Endangered, and candidate species occurring on the Hanford site (Table 4-1) excluded several species. (List provided)

**Response:**

Comment noted and Table 4-1 has been amended.



Comment 4:

Steelhead are incorrectly listed in Table 4-1, they are protected under the mid Columbia River ESU, not upper Columbia ESU.

Response:

The Hanford Site is within the mid Columbia and upper Columbia River ESUs. For clarity, footnote “c” has been deleted from Table 4-1.

Comment 5:

WDFW’s main concern with this EA is the insufficient amount of information documented to adequately determine the impact to the environment from this proposed project.

Response:

Additional information has been included in the EA concerning recent biological surveys in the 200 East Area. This has been included in Appendix B to the EA.

Comment 6:

This EA excluded maps that describe the impact site; maps and illustrations of the proposed project site including the aerial photo (2000) referenced on page 11, would have been helpful to include in the appendix.

Response:

A map (Figure 2) has been added to the final EA to illustrate the C tank farm layout.

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